AMSAT News Service Weekly Bulletins
Issue: ANS-169
Date: 2006-06-18
Sources: amsat-ans-2006-ans-169-weekly.txt

AMSAT NEWS SERVICE
ANS-169

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

********** AMSAT 2006 Space Symposium **********

The AMSAT web team has posted informational pages on the AMSAT web site. You can find the announcement with many links at:
http://www.amsat-org/amsat-new/symposium

Details of the Space Symposium Call for Papers can be viewed at:
http://www.amsat.org/amsat-new/symposium/2006CallForPapers.php

****

In this edition:

* EaglePedia is Now Open
* SSETI Moon Orbiter - Call for Proposals
* University of Illinois Provides Details of ION Cubesat
* AMSAT-UK Colloquium Draws ESA Support
* Final Reminder - ARISS and AO-51 Field Day Configurations
* AMSAT Awards This Week
* AMSAT Store Has New Items
* ARISS Status for the Week of June 12, 2006
* Multiple Cubesat Mission Launch Now Set for July 26

SB SAT @ AMSAT $ANS-169.01
EaglePedia is Now Open

AMSAT News Service Bulletin 169.01
From AMSAT HQ SILVER SPRING, MD.
June 18, 2006
To All RADIO AMATEURS
BID: $ANS-169.01

This week AMSAT EAGLE Project Manager Jim Sanford, WB4GCS, announced that EaglePedia is now open for general use.

EaglePedia is the communication medium used by the EAGLE developers, and is now accessible to all AMSAT members. A basic principle of the EAGLE project is open design, so Jim made the decision to open access to the EAGLE development effort once EaglePedia, a new effort itself, was judged to be ready for general use.

"The entire Eagle team has been enthusiastically supportive of openness to the members," said Jim. "We are excited to give all AMSAT members the opportunity to understand and to follow the design process of the various satellite components and systems".

Emily Clarke, N1DID has developed and customized the EaglePedia application using the MediaWiki software engine that was developed for Wikipedia. "I'd like to thank Emily for all her efforts. She has adapted the wiki product to our needs, educated the illiterati (mostly me) and added functions to make it easier for us to use. EaglePedia would not be the tool that it is, without tremendous effort on Emily's part, and I am extremely grateful for all her work."

All major decisions about the space craft and their supporting documentation will be available through the site. Although only EAGLE team members will have the ability to comment on what is posted there, all will be able to see them.

Jim notes that, "There will be some areas of the site that are available only for internal EAGLE team communications during the preliminary development stages. I have made this decision to allow unfettered communications among the team during the early phases of concept refinement and design. Once peer review of a design is complete, the initial design, peer review comments, the resolution of those comments, and the revised and approved designs will all be available to AMSAT members."

Jim, the entire EAGLE team, and AMSAT President Rick Hambly encourage everyone interested in amateur satellites to take advantage of this 'new way of working' and to follow the EAGLE design process and developments. "We are excited about offering the unprecedented access into EAGLE's development. I fully expect this approach to enhance the EAGLE design process and improve overall product quality", said Rick.

EaglePedia can be accessed via the AMSAT.org front page using the EAGLE link in the 'Quick Access to Project Pages:' section in the top right of the page.

Welcome to open satellite design.

[ANS thanks Jim, WB4GCS for the above information]

/EX

SB SAT @ AMSAT $ANS-169.02
SSETI Moon Orbiter - Call for Proposals

AMSAT News Service Bulletin 169.02
From AMSAT HQ SILVER SPRING, MD.
June 18, 2006
To All RADIO AMATEURS
BID: $ANS-169.02

The SSETI Association - Student Space Exploration & Technology Initiative, together with ESA - the European Space Agency, have just published a Call for Proposals for a Moon orbiter mission planned for launch around 2011.

The call is open to any University student or team from one of the ESA member states or one of the ESA cooperating states. The SSETO ESEO project, which is currently underway, already has at least three radio amateur students involved in addition to the AMSAT-UK team so it would be exciting if amateurs could become involved with the new lunar project.

The ESMO spacecraft would be launched in 2011 as an auxiliary payload into a highly elliptical, low inclination Geostationary Transfer Orbit (GTO) on the new Arianespace Support for Auxiliary Payloads (ASAP) by either Ariane 5 or Soyuz from Kourou. From GTO, the 200 kg spacecraft would use its on-board propulsion system for lunar transfer, lunar orbit

insertion and orbit transfer to its final low altitude polar orbit
around the Moon.

A 10 kg miniaturised suite of scientific instruments (also to be provided
by student teams) would perform measurements during the lunar transfer
and lunar orbit phases. The core payload would be a high-resolution narrow
angle CCD camera for optical imaging of lunar surface. Optional payload
items being considered include a sub-surface sounding radar for polar
ice detection, and a Cubesat subsatellite for precision gravity field
mapping via accurate ranging of the subsatellite from the main spacecraft.

Two different propulsion designs are being studied in parallel by the
students:
 + one based on a hybrid solid/liquid propulsion system
 + one relying upon solar electric propulsion.

The deadline for submission of proposals to the SSETI association is
15th August 2006. The full document is available for download from the
http://www.sseti.net website. This gives full details of the planned
mission, its scientific aims and communications needs.

[ANS thanks Graham, G3VZV for the above information]

/EX

SB SAT @ AMSAT $ANS-169.03
University of Illinois Provides Details of ION Cubesat

AMSAT News Service Bulletin 169.03
From AMSAT HQ SILVER SPRING, MD.
June 18, 2006
To All RADIO AMATEURS
BID: $ANS-169.03

Purvesh Thakker, the Program Manager of the Illinois Observing
Nanosatellite (ION), provided additional details of this cubesat
which will be launched on June 28, 2006.

The University of Illinois is looking for amateur radio operators
who can listen for ION's beacon, which will begin transmission on
437.505 Mhz immediately after launch. The beacon is sent in plain
text over AX.25 every 5 minutes. A TNC in monitoring in connection-
less mode should be able to copy the beacon. Send beacon reports
to cubesat@ece.uiuc.edu with your name/location, any data that you
receive, time of contact, and signal strength.

The ION cubesat's scientific mission includes:
 + An experiment to measure oxygen airglow emissions from the
   Earth's Mesosphere to helps scientists understand how energy
   transfers across large regions of the atmosphere.

 + A new MicroVacuum Arc Thruster (µVAT) with high dynamic range.
   This will provide the satellite with a versatile low mass sat-
   ellite propulsion system capable of lateral movement and finely
   controlling attitude.

 + Testing of a new utilizing a Commercial Off the Shelf (COTS)
   processor that is radiation hardened through system design
   techniques.

 + Testing of a small CMOS camera for Earth imaging.

 + Testing of ground based attitude stabilization.

Interested amateurs are invited to subscribe to a low volume ION
e-mail list by sending a message to:
cubesat-l-subscribe-request@listserv.uiuc.edu

The ION website can be found at: http://cubesat.ece.uiuc.edu

[ANS thanks Purvesh Thakker for the above information]

/EX

SB SAT @ AMSAT $ANS-169.04
AMSAT-UK Colloquium Draws ESA Support

AMSAT News Service Bulletin 169.04
From AMSAT HQ SILVER SPRING, MD.
June 18, 2006
To All RADIO AMATEURS
BID: $ANS-169.04

AMSAT-UK's 2006 Colloquium, which is to be held from 28-30th July at the University of Surrey, Guildford, has attracted the support of the European Space Agency (ESA). The ESA Education Office have confirmed that they will support the Colloquium by sponsoring the travel and accommodation costs for up to five university students so that they can attend and present at the meeting.

This opportunity is open to any University student presently studying in one of the ESA member states or one of the ESA cooperating states. Students who are interested in applying for this sponsorship should urgently contact Tor.Viscor@esa.int giving their details and information about their proposed paper.

Additionally ESA have approved the attendance of Neil Melville - the SSETI Express project co-ordinator. Neil will be giving a full report on the SSETI Express experience and the "Knowledgebase" that has been created as a result. He will also be discussing the establishment of an internet linked World-wide network of University and radio amateur groundstations to help support future launches of satellites in the amateur satellite service.

AMSAT-UK is very pleased to receive this support from ESA as this will further assist towards promoting the synergistic relationships that already exist between the two groups of space enthusiasts.

Also at the Colloquium, AMSAT-UK and the next SSETI "Student Space Exploration & Technology Initiative" satellite project - ESEO will provide additional information about the AMSAT-UK payload, a linear 60 kHz wide transponder for the satellite.

The transponder will be a single Mode U/S device and will incorporate a STELLA SDR processor to provide the best possible system performance for all uplinked signals. The transponder is also expected to provide telecommand and telemetry facilities for mission controllers immediately after launch and before the planned earth pointing attitude has been achieved. It will also include a 400bps telemetry beacon.

Full details of the 2006 Colloquium and the online booking form can be found at http://www.uk.amsat.org/Colloquium/

The ESA website has the latest details of the SSETI-ESEO project at:
http://www.esa.int/esaED/SEM29W9ATME_highereducation_0.html

[ANS thanks Graham G3VZV for the above information]

/EX

SB SAT @ AMSAT $ANS-169.05
Final Reminder - ARISS and AO-51 Field Day Configurations

AMSAT News Service Bulletin 169.05
From AMSAT HQ SILVER SPRING, MD.
June 18, 2006
To All RADIO AMATEURS
BID: $ANS-169.05

The ARISS Phase 2 station aboard the International Space Station will be configured in crossband repeater mode--437.800 MHz up and 145.800 MHz down for Field Day. Is is being requested that **ONLY** low-power (QRP) Earth stations access the system. The definition of a QRP station for this activation will be the same criteria that AMSAT is using for its QRP operations on ECHO (AO-51) for Field Day.

Next, starting on June 19 AO-51 will be in the Field Day Configuration to give stations time to test their gear before the June 24-25 event.

FM Repeater ON - Uplink 145.920 mHz FM with 67 hz Tone
Downlink 435.300 mHz FM

QRP Repeater ON - Uplink 145.880 mHz FM, QRP Power Limits
Downlink 435.150 mHz FM

AO-51 ECHO/ISS LOW POWER STATION (QRP) REQUIREMENTS:
To attempt to keep this simple a low power station will be defined as a station which can deliver no more than 10 watts to a vertical or handheld antenna. Some examples of Low Power Stations:

1. Using an HT (barefoot, no amplifier) with 10 watts or less output into any type of vertical whip antenna (rubber duck, etc) or handheld beam antenna (arrow type).

2. Using a mobile station with 10 watts or less output into car mounted mobile whip antenna(s).

3. Using a base station at 10 watts output into a vertical Omni directional antenna on the side of the house.

Examples that are **NOT** Low Power Stations:
1. Any type of high gain beam antenna, KLM, M2, Cushcraft, etc.

2. Any station transmitting over 10 watts into any type of antenna.

The crossband repeater should be activated Thursday, June 22 (late in the crew day) so ground operators can have a chance to practice with their QRP setups and learn how best to deal with the Doppler on the uplink. It will be deactivated on Monday as required for the docking of the Progress cargo supply ship.

If Jeff Williams (KD5TVQ) and/or Pavel Vinogradov (RV3BS) do get a chance to talk on the radio, they will be using the crossband repeater mode and will be giving "NA1SS, 1 Alpha, ISS" or "RS0ISS, 1Alpha, ISS" respectively.

REMINDER - Contacts through the ISS crossband repeater count as a satellite contact for Field Day bonus points, but contacts with the crew do not count for Field Day satellite bonus points.

[ANS thanks Ken, N5VHO and the AO-51 Command Team for the above information]

/EX

SB SAT @ AMSAT $ANS-169.06
AMSAT Awards This Week

AMSAT News Service Bulletin 169.06
From AMSAT HQ SILVER SPRING, MD.
June 18, 2006
To All RADIO AMATEURS
BID: $ANS-169.06

Bruce, KK5DO wearing his AMSAT Director Contests and Awards hat says this week, congratulations go out to all of the following:

We would like to welcome the following to the satellite community. They have made their first satellite contact and are now members of the AMSAT Satellite Communicators Club:

+ Edward Chuang, BX1AD
+ Robert Wyckoff, KB3MBO
+ Karn Suwanrat, E20ZFD

Zachary Schrempp, KM7I, is awarded the W4AMI Award #44.

To see all the awards visit http://www.amsat.org.

[ANS thanks Bruce, KK5DO for the above information]

/EX

SB SAT @ AMSAT $ANS-169.07
AMSAT Store Has New Items

AMSAT News Service Bulletin 169.07
From AMSAT HQ SILVER SPRING, MD.
June 18, 2006
To All RADIO AMATEURS
BID: $ANS-169.07

Bruce, KK5DO wearing his AMSAT Online Store Manager hat invites all to visit the AMSAT Online Store to take a look at some of the new items.

Bruce says, "We have added the 2006 edition of the AMSAT Shirts and Caps as well as the newly updated 'Getting Started With Amateur Satellites 2006' publication. Are you into patches and decals? There is a new Eagle patch and decal."

Besides these new items, you can also apply for your AMSAT awards online and join or renew your AMSAT membership.

The online store is for you, we welcome any comments or suggestions. Go to http://www.amsat-na.com/categories.php to enter the store.

[ANS thanks Bruce, KK5DO for the above information]

/EX

SB SAT @ AMSAT $ANS-169.08
ARISS Status for the Week of June 12, 2006

AMSAT News Service Bulletin 169.08
From AMSAT HQ SILVER SPRING, MD.
June 18, 2006
To All RADIO AMATEURS
BID: $ANS-169.08

1. New Jersey Contact Successful
The re-scheduled ARISS contact with Salt Brook Elementary School, an ARRL Big Project school in New Providence, New Jersey, was successfully completed on June 5. Ten students asked twelve questions of astronaut Jeff Williams, KD5TVQ, as approximately 600 students, teachers and parents witnessed the event. The New Providence Amateur Radio Club (NPARC) assisted with the radio contact.

2. NASA Explorer School Contact Successful
Scarlett Middle School experienced an ARISS contact on June 6. Scarlett, a NASA Explorer School in Ann Arbor, Michigan, is attended by approximately 600 students in grades 6 - 8. During the contact, thirteen students asked one question each of Jeff Williams, KD5TVQ. Students, teachers, parents, school administrators and representatives from the Ann Arbor Board of Education and Congressman John Dingell's office attended the event, as did NASA Aerospace Education Specialist Jim Fitzgerald. Media coverage included the Ann Arbor News, whose article may be found on the web. See:
http://www.mlive.com/news/aanews/index.ssf?/base/news-18/11496912607210.xml&coll=2&thispage=1

3. Upcoming School Contact
The European Space Center Camp in Transinne, Belgium had a contact with the ISS on Tuesday, June 13 at 13:39 UTC. This was a telebridge contact via the station, W6SRJ, in Santa Rosa, California. Approximately 100 children, ages 8 - 18, from several European countries, attend the camp for 5 days each week.

4. School Selection Committee Meeting Held
The ARISS Educational Outreach/School Selection Committee Meeting was held on Thursday, June 8. A new volunteer, Rita Wright, KC9CDL, has joined ARISS. She was the first teacher to have a contact with the ISS and will be reviewing and helping teachers select lesson plans for the classroom. This and other topics of discussion may be found in the meeting minutes, which have been posted to the ARISS website.
See: http://www.rac.ca/ariss/arissschm.htm

5. ARISS Member Receives Silver Snoopy Award
On Thursday, June 8, Bill McArthur, KC5ACR, presented ISS Ham Project Engineer Kenneth Ransom, N5VHO, with a Silver Snoopy award for his hard work and dedication to the ARISS program during Expedition 12. The pin flew on McArthur's first mission, STS-58, Columbia, in 1993. Congratulations Kenneth!

[ANS thanks Carol, KB3LKI for the above information]

/EX

SB SAT @ AMSAT $ANS-169.09
Multiple Cubesat Mission Launch Now Set for July 26

AMSAT News Service Bulletin 169.09
From AMSAT HQ SILVER SPRING, MD.

June 18, 2006
To All RADIO AMATEURS
BID: $ANS-169.09

Roland Coelho, the CubeSat Acting Launch Coordinator at the California Polytechnic State University reports via the CubeSat mailing list that Kosmotras has recently notified the CubeSat teams that the DNEPR-1 launch has been officially postponed to July 26th with a reserve date of July 27th. The delay is due to a technical problem experienced during launch vehicle preparation.

The approximate three week delay will be used to prepare a backup launch vehicle. The delay will also effect the date of P-POD integration which means the satellites will be integrated with the launch vehicle starting some time around July 14th.

The CubeSat project is a collaboration between California Polytechnic State University-San Luis Obispo and Stanford University's Space Systems Development Laboratory.

[ANS thanks Roland Coelho at Cal Poly for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM